

O'BRIEN LAKE OUTLINE PLAN

OP-03-01
Council Resolution June 16, 2003

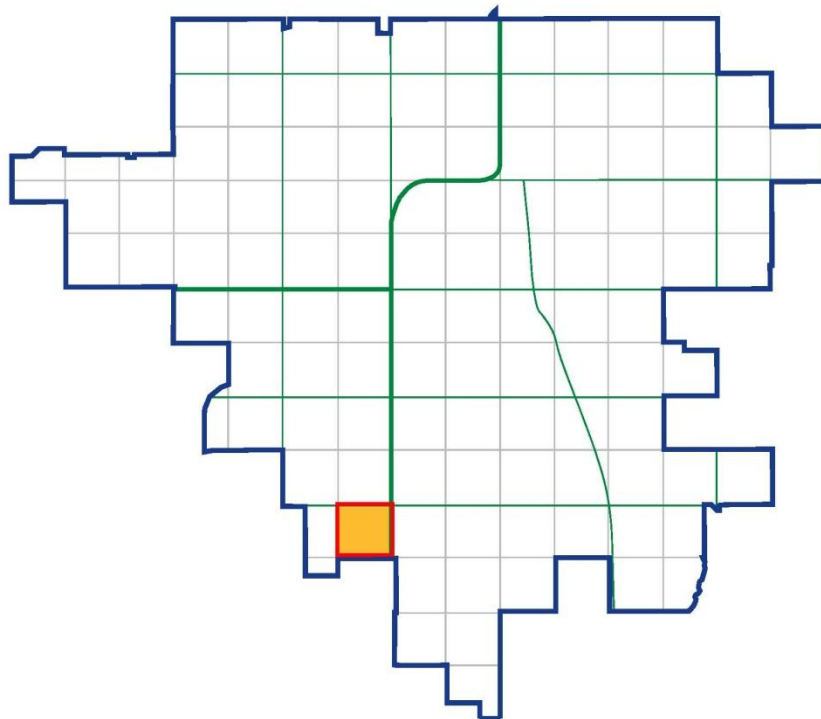


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1.0 INTRODUCTION

1.1 Purpose of Plan

This Outline Plan has been prepared on behalf of 272649 Alberta Ltd. to provide a detailed framework for the future development of a quarter section of land in south Grande Prairie for predominantly residential purposes. It has been prepared in accordance with Policy 15.7 of the City of Grande Prairie Municipal Development Plan. As required by this policy, the Plan addresses the following:

- Physical features and development constraints;
- Future land use and development concept, including lot layout;
- Proposed transportation network, including the approximate alignment of future arterial, collector and local roads;
- Disposition of municipal reserve;
- Proposed servicing for the area; and
- Intended phasing of development.

1.2 Plan Area Location

This OP applies to a quarter section of land legally described as NE 10-71-6-W6M. The Plan area is bounded to the north by 68 Avenue and to the east by 108 Street (Wapiti Road). The City boundary is located along the south and west sides of the subject lands as indicated in Map 1.

Although much of the land immediately adjacent to the Plan area is currently in agricultural production, this area of the City is gradually being affected by urban development. The Pinnacle Ridge neighbourhood is developing on the lands to the north, and the newly developed Community Knowledge Campus is located across 108 Street to the northeast. In addition, the recent construction of 68 Avenue to the east, including a bridge across Bear Creek, will contribute to the development of the southwest area of the City through improved accessibility to other areas of the City.

Other existing development in the area includes a small amount of acreage development to the east of 108 Street, a farmstead on lands to the west, and a trucking operation and Dunvegan Gardens greenhouse on County lands to the south.

1.3 Ownership and Dispositions

The Plan area consists of 63.6 ha of land (C. of T. No. 922 282 933) under the ownership of Kulhawe Holdings Ltd¹. The quarter has been subdivided twice to accommodate road widening (Road Plans 3191 KS and 4392 PX). An Alberta Power easement runs along the south boundary of the quarter.

¹ An agreement for sale is in place with 272649 Alberta Ltd., but the transfer of land has not yet occurred.

1.4 Policy and Regulatory Context

The O'Brien Lake OP Has been prepared in accordance with the requirements of the Grande Prairie MDP. This OP is also consistent with MDP policies respecting the provision of a diversity of housing types, utilization of spare servicing capacity, the development of an efficient land use pattern, and the preservation of significant natural features. Aspects of the land use pattern contained in this Plan are not, however, consistent with the Development Concept contained in the Southwest Area Structure Plan. As a result, an amendment to the Southwest ASP is required prior to approval of this OP. This requirement is discussed further in Section 4.2.

The Plan area is currently designated as Urban Reserve (UR) in the Grande Prairie Land Use Bylaw. The subject lands will be rezoned to reflect the land uses contained in this OP prior to subdivision and development approval.

The easterly portion of the Plan area is located within 500 m of a NavCanada airport beacon, which is located at the center of the quarter section to the east. In order to ensure that future development is compatible with the operation of this facility, all development proposed for the easterly portion of the Plan area will be circulated to NavCanada for review and approval.

1.5 Site Characteristics

The dominant feature of the Plan area is a water body known locally as O'Brien Lake, located at the central portion of the quarter. The lake occupies approximately 15% of the Plan area (~10 ha), the bed and shore of which will likely be claimed by the Crown at the time of subdivision². As illustrated in Map 2, the lake is bordered by vegetation, with the thickest tree stands being on the south side. Relatively dense aspen forest is located at the west end of the lake.

With the exception of the forested lands around the lake and a large grove of trees adjacent to 68 Avenue, all lands in the Plan area are currently under cultivation. There are no buildings on the site.

The majority of the Plan area is characterized by a substantial slope from northwest to southeast on the lands north of the lake as illustrated on Map 3, averaging a 2.7% grade. The highest elevation is approximately 668 m at the northwest corner of the site, dropping to 653 m at the lakeshore. The land south of the lake is basically flat, with elevations varying between 653 and 654 m throughout the area.

² The top of bank will be determined by an Alberta Land Surveyor in consultation with Provincial authorities.

2.0 DEVELOPMENT PLAN

2.1 Plan Objectives

The O'Brien Lake OP is intended to achieve the following objectives:

1. To provide an overall framework for future residential, open space and commercial development in the south end of the City that is compatible with development located on, or proposed for, adjacent lands;
2. To provide for the development of a unique and attractive residential neighbourhood that is designed to take advantage of natural topography and physical features;
3. To preserve O'Brien Lake as a natural environmental amenity for the area, to enhance the lake through sensitive stormwater management practices, and to maximize the recreational opportunities that the lake provides;
4. To develop a safe and efficient transportation network that meets the needs of passenger vehicles, pedestrians, cyclists, and public transit; and
5. To develop an efficient municipal servicing and phasing system for the Plan area.

2.2 Development Concept

2.2.1 General

The proposed land use concept for the O'Brien Lake OP is illustrated in Map 4 and a summary of land uses is provided in Table 1. It is proposed that the Plan area be developed for residential use with provision for a large-lot estate development located south of the lake.

As indicated in Table 1, the gross developable area available is approximately 51 hectares once the area occupied by the lake and associated environmental reserve, and additional right-of-way for 68 Avenue is removed. Additional lands totaling 0.8 hectares have been added to the Plan area due to the integration of half the undeveloped road allowance on the west boundary of the Plan area, as it is not required for roadway purposes. Formal inclusion of these lands will require a road closure and consolidation of these lands at or prior to the time of subdivision.

TABLE 1 – LAND USE SUMMARY

Land Use	Area (ha)	Percent
Gross Area	63.6	
Less Environmental Reserve ³	(12.56)	
Less 68 Avenue Widening	(1.00)	
Add East ½ of Road Allowance	0.77	
Gross Developable Area	50.81	100.00
Residential	31.47	62.00
Single Family	24.10	47.40
Single Family Estate	7.37	14.50
Open Space	5.19	10.20
Neighbourhood Parks	2.70	5.30
Lake Buffer	2.49	4.90
Roads	13.32	26.20
Collectors (Major and Minor)	7.98	15.70
Locals	5.34	10.50
Public Utility Lots	0.83	1.60

2.2.2 Residential Development

The largest single land use in the Plan is low-density residential development, totaling approximately 31 ha in area. Of this, 7.4 ha is proposed for large residential estate lots on the south side of the lake.

Overall, a total of approximately 410 single family units are anticipated for the area, with lot sizes ranging from 10.4 m to 15 m in width for a majority of the Plan area. The Plan proposes a transition of lot sizes, with lot width increasing with proximity to the lake. Lot size increases to a minimum of 20 m (averaging 0.1 ha) for the estate lots located south of the lake.

As illustrated in Table 2, it is anticipated that approximately 472 units of all types may be accommodated in the Plan area, representing approximately 1,512 residents of which an estimated 304 will be of school age. This equates to a residential density of about 30 persons per gross hectare. This is under the MDP guideline of 40-50 persons per gross hectare, but is warranted in order to provide for the estate lot development south of the lake, as well as wider lot widths along the north shore of the lake.

³ Includes O'Brien Lake.

TABLE 2 – POPULATION AND STUDENT GENERATION

Population Generation		
Single Family	410 units @ 3.2 ppu	1,312
Estate Residential	62 units @ 3.2 ppu	200
Total Population		1,512
Student Generation⁴		
Total Students	23.2% of Population	304
Total Public	63.4% of Total Students	193
Total Separate	36.6% of Total Students	111
Public School Students		
Total Students		193
Total K-9	76% of Students	147
Total 10-12	24% of Students	46
Separate School Students		
Total Students		111
Total K-9	76% of Students	84
Total 10-12	24% of Students	27

2.2.3 Commercial Development

No commercial development is proposed for the O'Brien Lake area.

2.2.4 Open Space

Developed open space in the Plan area is accommodated through the provision of four large neighbourhood parks as indicated in Map 5. These parks range from 0.35 ha to 1.36 ha in size, well in excess of City standards. One of the largest spaces, located in the north-central portion of the area, is designed to be developed in two phases as development proceeds. No school sites are proposed for the Plan area, as future school sites are located on lands to the west and in Westpointe pursuant to the Southwest ASP.

For the purpose of protecting the integrity of the lake and bordering vegetation, provision is made for the dedication of environmental reserve (ER) along the lakeshore⁵. The proposed ER is to be a minimum of 6 m in width adjacent to the top of bank as identified by site inspection⁶, and will be confirmed at the time of survey. In addition, it is intended that the lake outlet at the west end of the lake, as well as a heavily wooded area of approximately 1.4 ha west of the north-south collector, also be preserved through the dedication of ER. It is intended that this area remain as a natural park, with provision for picnicking facilities. Total ER dedication in the Plan area is approximately 12.6 ha including the lake.

⁴ Based on school enrolments as of April 30, 2002.

⁵ This shoreline protection is not addressed at the east end of the lake as it is located within the 108 Street right-of-way.

⁶ Based on determination of top of bank undertaken by HIW Surveys on May 4-5, 2002. The actual boundary will be confirmed at the time of subdivision in consultation with Provincial authorities.

In addition to the above, a 16 m-wide corridor of municipal reserve (MR) is proposed to abut the ER lands in order to accommodate a trail system around the lake⁷. With the exception of a few locations on the south side of the lake, this combined ER/MR strategy corresponds with existing tree lines, minimizing the need to remove established vegetation.

The issue of open space provision is to be addressed in greater detail through the required Parks Design Report.

⁷ A 1.5 m chain link fence is to be installed along the residential property lines adjacent to this MR area in order to maintain separation between private and public lands.

3.0 INFRASTRUCTURE

3.1 Transportation Network

The Plan area is served by two arterial roadways, 68 Avenue to the north and 108 Street to the east, both of which are eventually to be developed to a four-lane divided standard. In order to accommodate the eventual widening of 68 Avenue, a strip of land 12.7 m in width⁸ has been provided along the north boundary of the Plan area. In addition, lots backing on to 68 Avenue and 108 Street roadways have been designed with extra depth in order to accommodate berming.

In accordance with City standards and the Southwest ASP, major collector access to the O'Brien Lake area is limited to 68 Avenue at 110 Street, and 108 Street at 60 Avenue. This is consistent with approved accesses into Pinnacle Ridge to the north and proposed all-directional access across 108 Street to the east. In addition, these collectors are proposed to link to the lands to the west, which are eventually slated to be annexed into the City and developed for residential and school purposes. This alignment will also facilitate the efficient future routing of public transit from Pinnacle Ridge.

As illustrated in Map 6, the Plan area is also to be served by a hierarchy of roads, including minor collectors and local roads. Provision has been made for a permanent emergency access to 68 Avenue at the northwest corner of the Plan area. It is intended that this access be developed when development warrants. All roadways are to be developed to City standards.

Accommodation for pedestrians and cyclists is provided through the development of a 3 m asphalt trail and 2 m concrete sidewalk network that provides connections to future trails along 68 Avenue linking to the Community Knowledge Campus and Muskoseepi Park to the east. In addition, internal connections are provided to neighbourhood parks and O'Brien Lake, around which a trail system will be developed. It is intended that these trail connections will serve as a critical asset for the neighbourhood.

There is an undeveloped road allowance located to the west of the Plan area that is not required for road purposes. As a result, it is assumed that this road allowance will be disposed of through a road closure bylaw, and at least half of its width be consolidated into the proposed development during the subdivision process.

⁸ Subject to confirmation through the Transportation Design Report.

3.2 Water Distribution

Generally the three main feeds to the Plan area are the connection to the 500mm diameter ductile iron watermain located on the east side of Highway 40 at 68 Avenue, the 200mm connection at the collector intersection along 68th Avenue to Pinnacle Ridge, and an additional 200mm connection near the west boundary of the development along 68 Avenue to Pinnacle Ridge. The proposed water system for the Plan area is illustrated on Map 7.

Additional information pertaining to the water distribution/fire system is outlined in the detailed design report for water.

3.3 Sanitary Sewer

As outlined on Map 8, the northerly portion of the Plan area will be collected via internal sanitary gravity mains and connected to the existing 375mm diameter sanitary located at 68 Avenue and Highway 40. The remainder of the quarter will be collected via internal sanitary gravity mains, and connected to a lift station located at the southeast quadrant of the quarter. Alternatively, it may be connected to the future Sanitary Sewer Trunk Main, depending on timing of development of the subject area and future servicing to be determined within the City of Grande Prairie's Sanitary Sewer Master Plan update.

Additional information pertaining to the sanitary sewer system for the subject area is outlined in the detailed design report for sanitary.

3.4 Stormwater Management

The existing O'Brien Lake will be utilized to control storm water from the northern residential area. The outlet of the lake at its west end will be controlled to below pre-development flows to allow the residential areas south of O'Brien Lake to discharge undetained. The overflow from O'Brien Lake and the undetained storm water from the south of O'Brien Lake will be directed to Flyingshot Creek via a piped and open ditch system along the Highway 40 right-of-way. A temporary open ditch overflow will be utilized in Phases 1 through 5 of the development. This ditch is the current overflow from O'Brien Lake to Flyingshot Creek.

On-site storm water management will be employed on the commercial site south of the lake. The storm water from this commercial area will be tied into the ultimate piped outfall to Flyingshot Creek on the Highway 40 alignment.

Lot grading south of O'Brien Lake will be designed to direct the maximum area of surface runoff toward the lake from bordering residential lands.

Additional information pertaining to the storm water management for the subject area is outlined in the detailed design report for storm.

3.5 Shallow Utilities

All shallow utilities (natural gas, power, telephone) are to be extended into the Plan area by the individual franchise holders as required.

In accordance with City policy, all overhead lines located adjacent to residential areas will be installed underground at the Developer's expense.

4.0 IMPLEMENTATION

4.1 Phasing

A tentative phasing plan is provided in Map 10. It is intended that development of the subject lands start at the north end of the Plan area in order to take advantage of the existing 68 Avenue sanitary sewer and water lines. Development will then proceed to the south as conditions warrant.

4.2 Statutory Plan Amendments

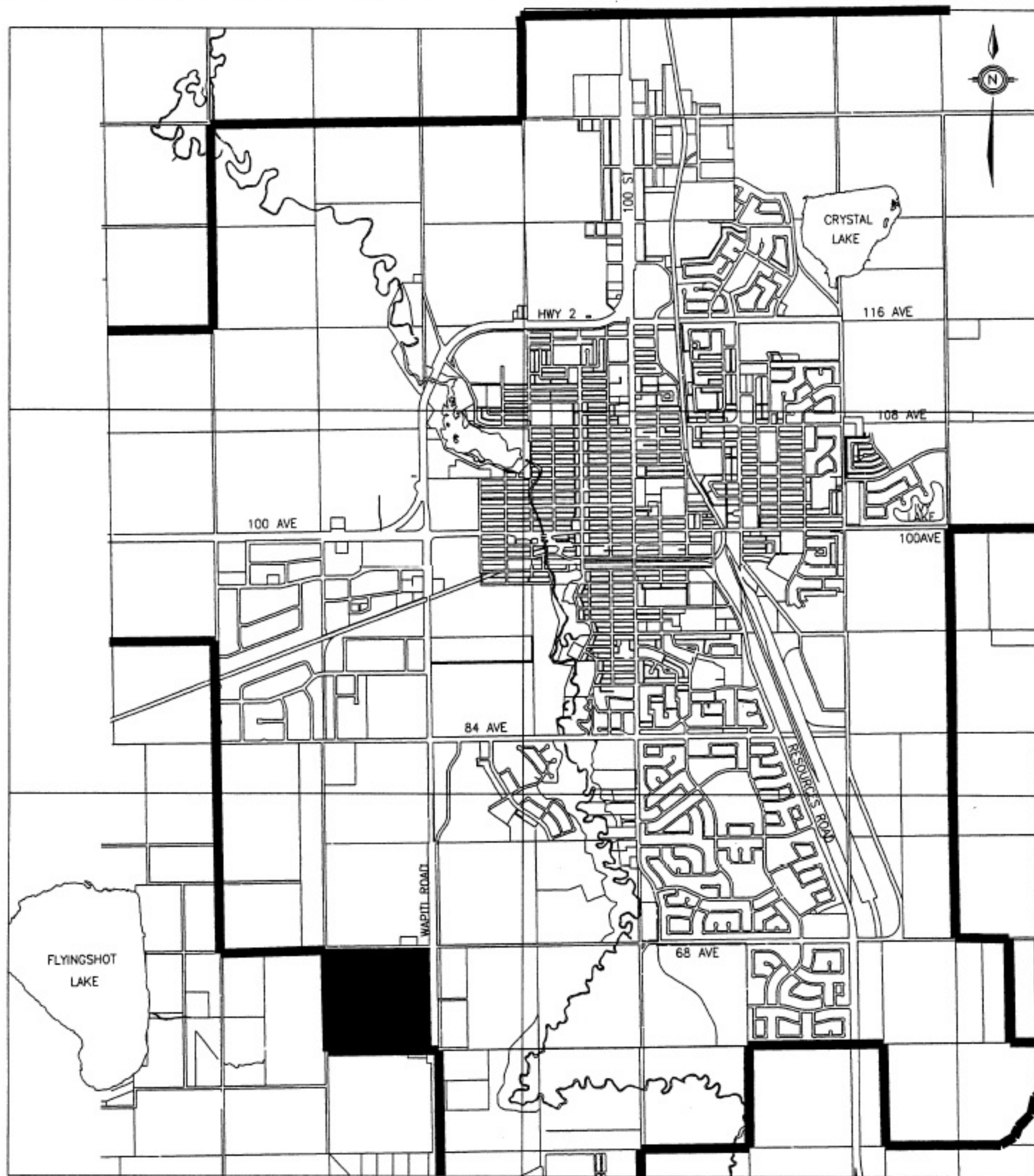
The Southwest ASP was approved in May 2002 with a land use pattern that included a neighbourhood commercial site and multi-family node at the north entrance of the O'Brien Lake area. The Plan also proposed a business park development south of the lake. This original land use pattern does not reflect the desires of the new owners of the subject land and an amendment to the Southwest ASP (prior to OP approval) will be required incorporating the following:

- Elimination of the business park node and replacement with residential development;
- Relocation of the neighbourhood commercial site from the intersection of 68 Avenue/110 Street (the north entrance to the Plan area) to 60 Avenue/108 Street (south entrance);
- Relocation of the multi-family site from the north end of the Plan area to the southwest corner.

This amendment will be submitted to the City concurrently with this OP and LUB amendment.

4.3 Proposed Zoning

Proposed zoning for the Plan area is identified in Map 11. The areas slated for single family residential development will be zoned under the Low Density Residential (RL) District of the LUB. The balance of the area will be zoned under the Combined Density Residential (RC) and Local Commercial (CL) Districts at the appropriate locations. All zoning changes will be made in advance of subdivision approval.



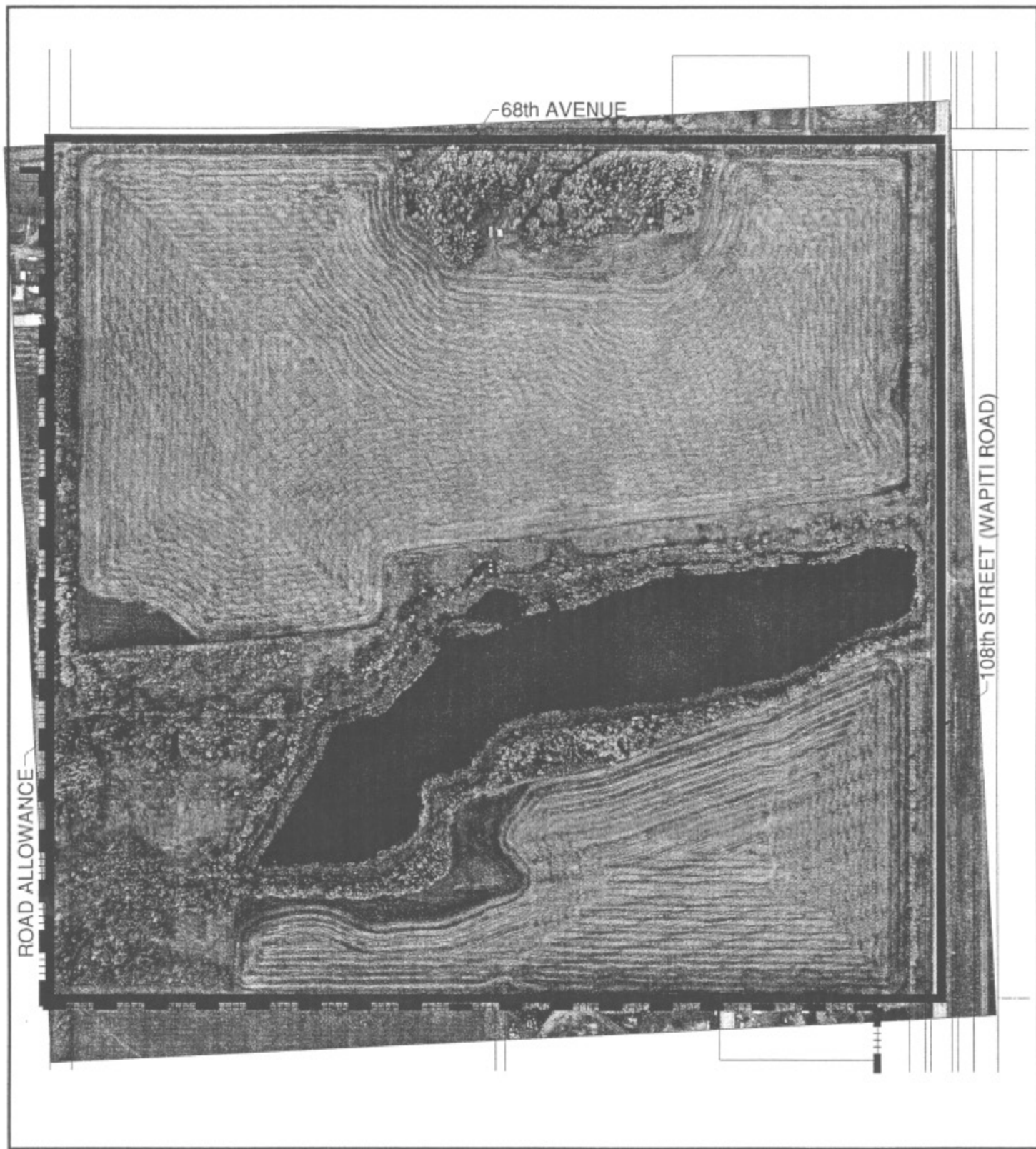
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O'BRIEN LAKE OUTLINE PLAN

- CITY BOUNDARY
- PLAN AREA

Map 1 LOCATION MAP





LEGEND

O'BRIEN LAKE OUTLINE PLAN

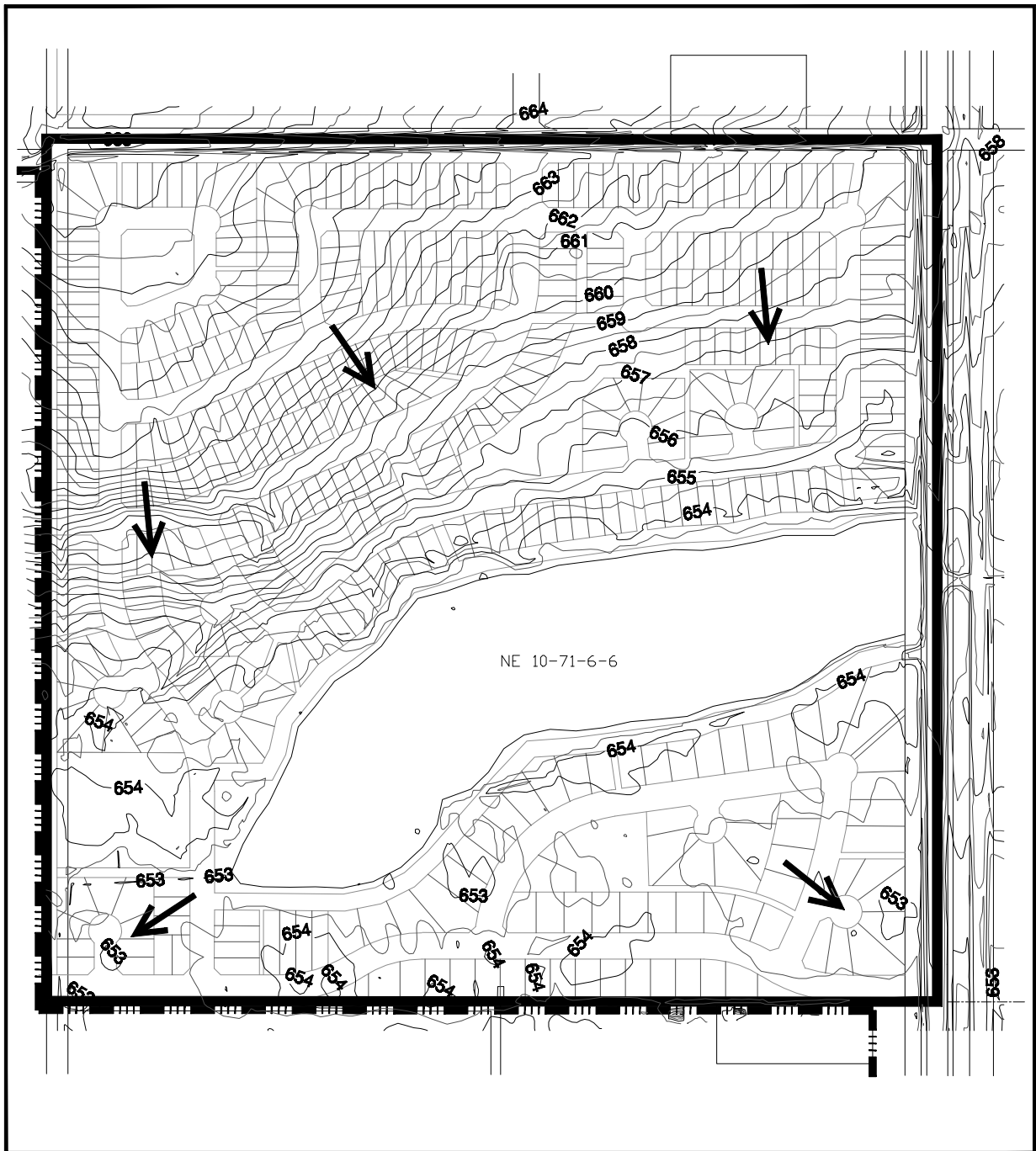
Map - 2

EXISTING CONDITIONS







— — — CITY BOUNDARY

— — — PLAN BOUNDARY



LEGEND

-  CITY BOUNDARY
-  PLAN BOUNDARY
-  DIRECTION OF FLOW
-  663 CONTOUR ELEVATION

O'BRIEN LAKE OUTLINE PLAN

Map - 3
EXISTING TOPOGRAPHY
 OP-03-01B February 6, 2012



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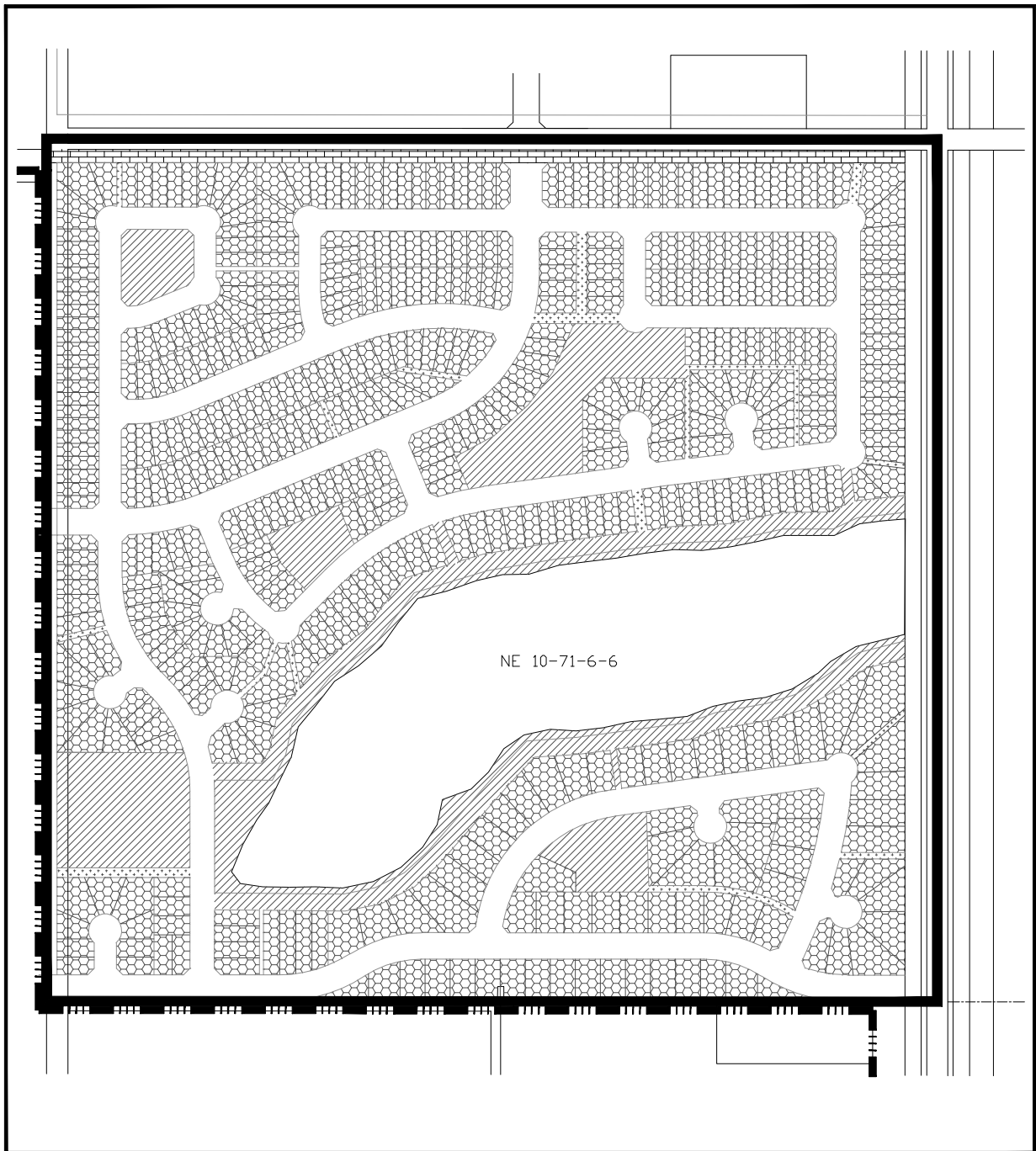
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LEGEND

- CITY BOUNDARY
- PLAN BOUNDARY
- LOW DENSITY RESIDENTIAL
- LOCAL COMMERCIAL
- PARKS / OPEN SPACE
- PUBLIC UTILITY LOTS
- ROAD WIDENING
- ROADS

O'BRIEN LAKE OUTLINE PLAN

Map - 4 LAND USE CONCEPT

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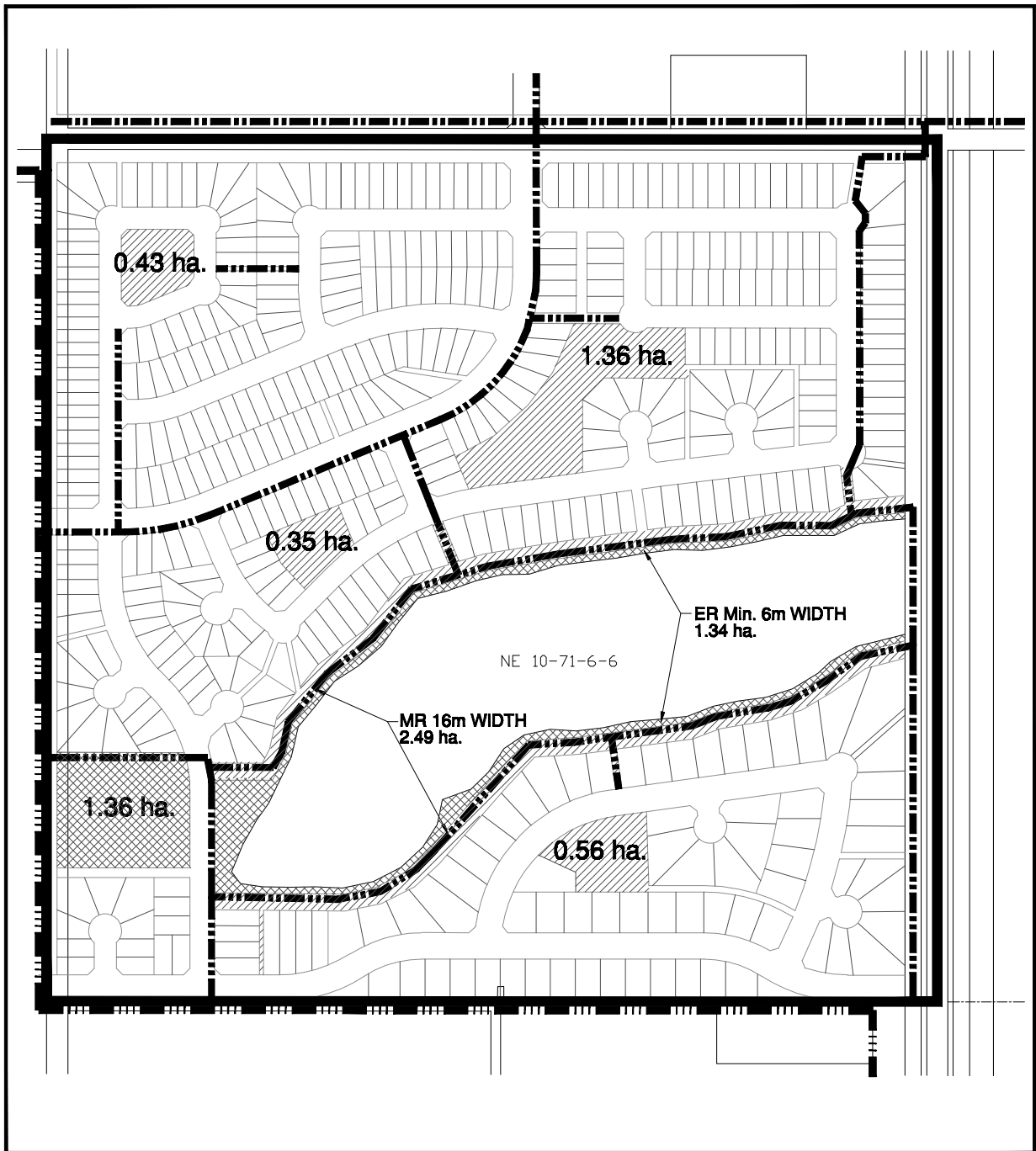
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LEGEND

- CITY BOUNDARY
- PLAN BOUNDARY
- ▨ MUNICIPAL RESERVE
- ▩ ENVIRONMENTAL RESERVE
- - - PEDESTRIAN LINKAGES/TRAILS

O'BRIEN LAKE OUTLINE PLAN

Map - 5

OPEN SPACE CONCEPT

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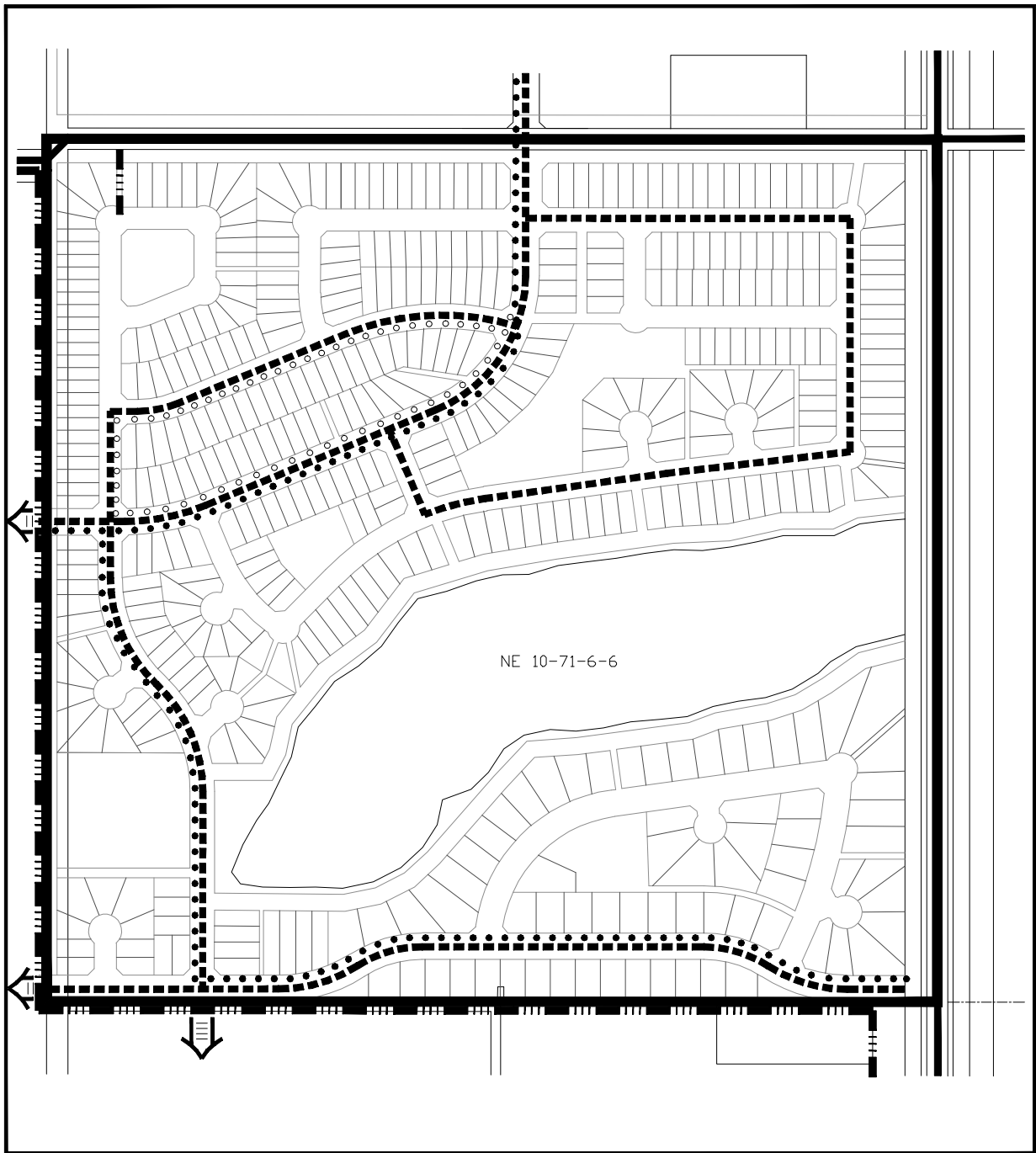
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LEGEND

- ARTERIAL ROAD
- - - -** COLLECTOR ROADS (MAJOR & MINOR)
- o o o o** TEMPORARY TRANSIT ROUTE
- • • •** TRANSIT ROUTE
- / - / - /** EMERGENCY ACCESS
- ←** FUTURE COLLECTOR ROAD

O'BRIEN LAKE OUTLINE PLAN

Map - 6

TRANSPORTATION SYSTEM

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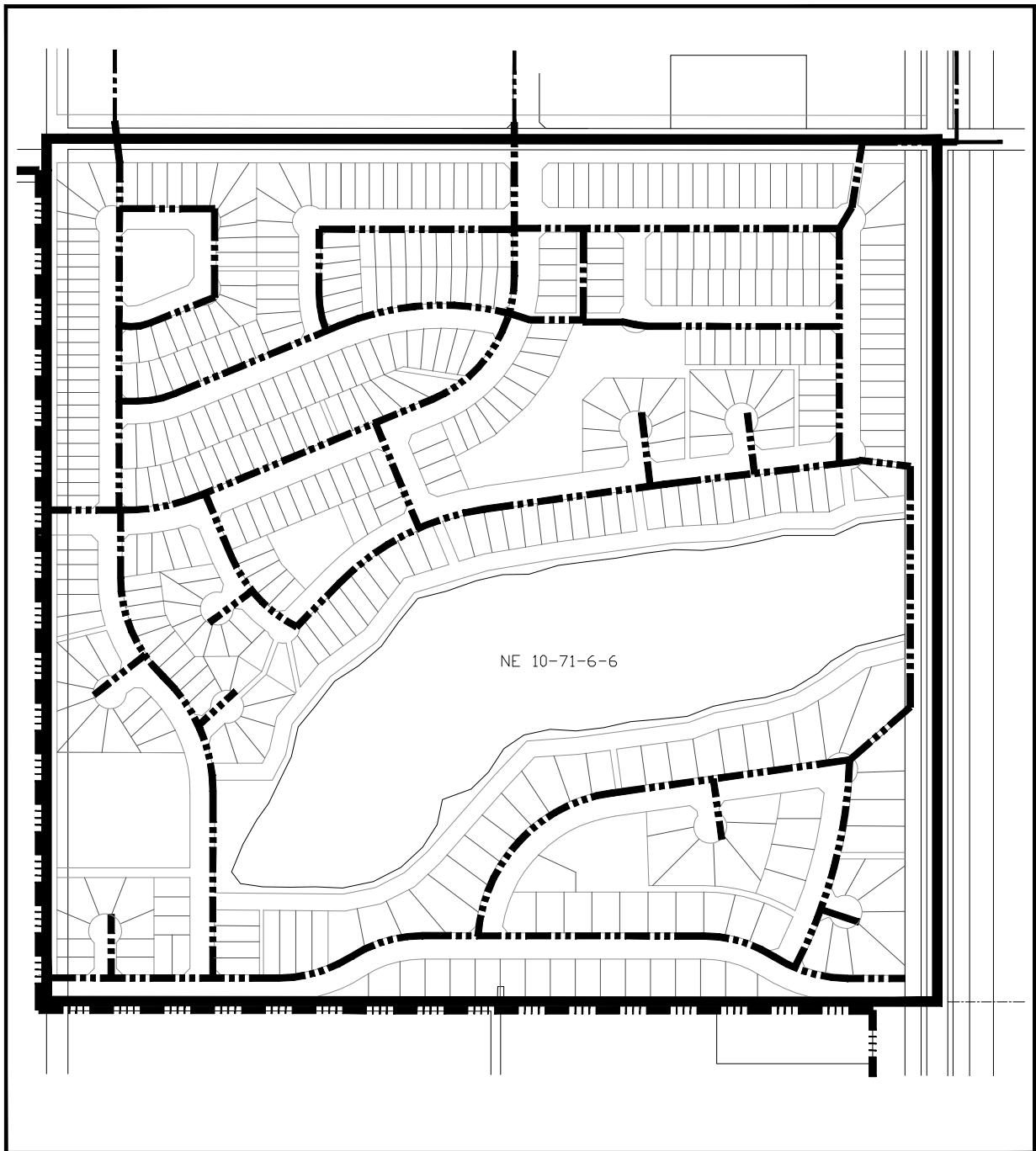
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LEGEND

- CITY BOUNDARY
- PLAN BOUNDARY
- WATERMAIN
- EXISTING WATERMAIN

O'BRIEN LAKE OUTLINE PLAN

Map - 7 OVERALL WATERMAIN SERVICING

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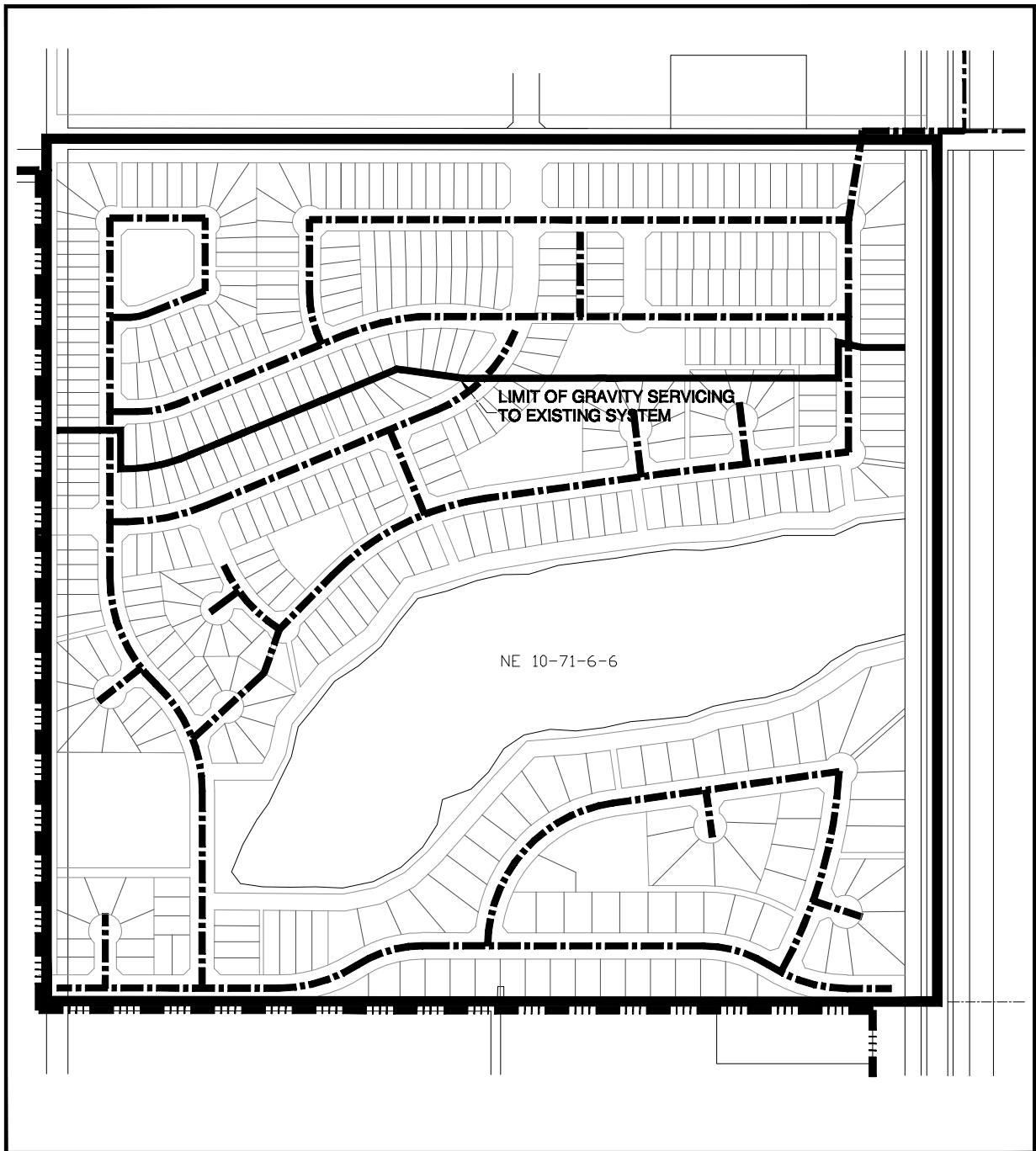
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LEGEND

- CITY BOUNDARY
- PLAN BOUNDARY
- SANITARY SEWER
- EXISTING SANITARY SEWER

O'BRIEN LAKE OUTLINE PLAN

Map - 8 OVERALL SANITARY SEWER SERVICING

OP-03-1B February 6, 2012



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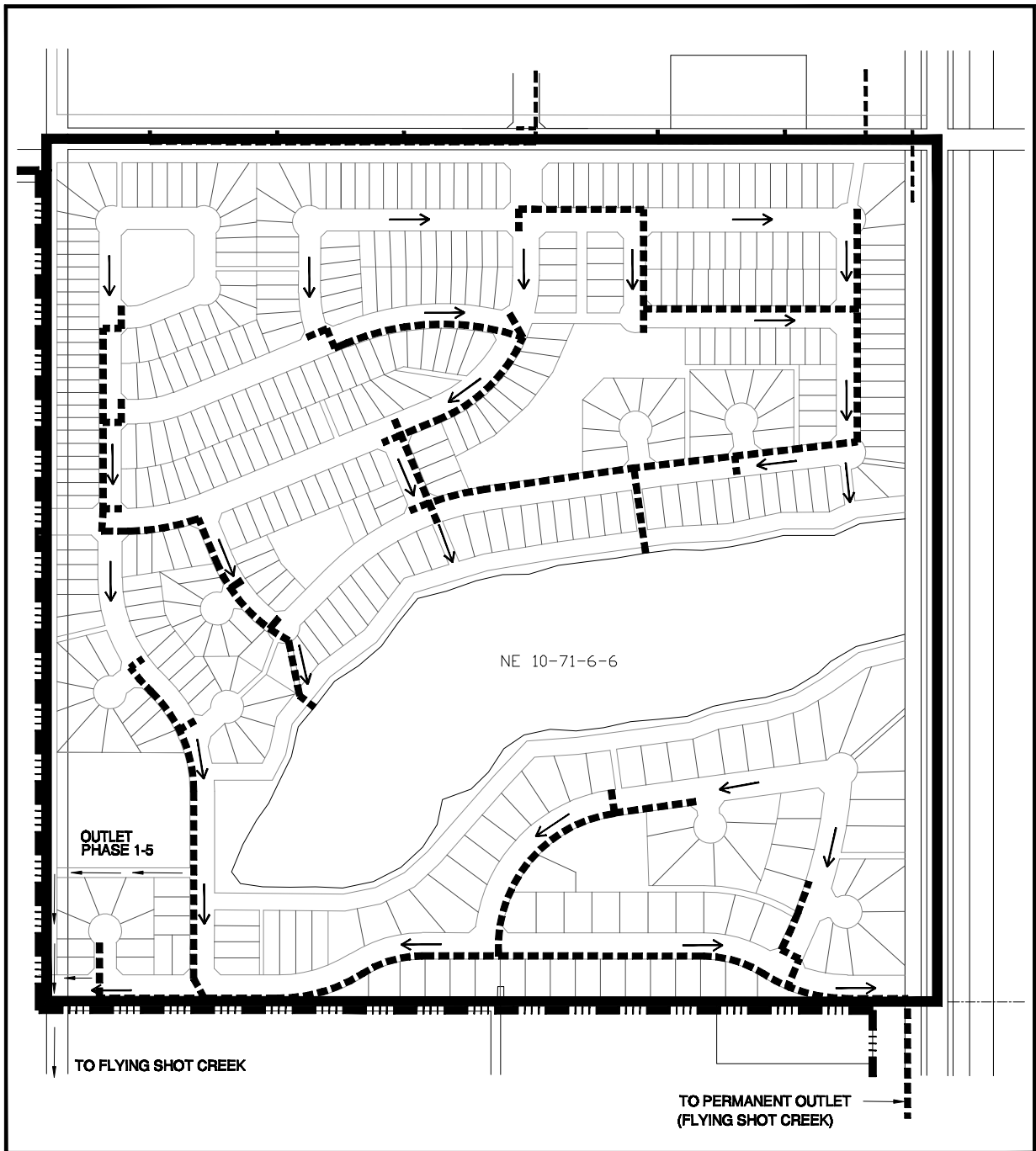
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LEGEND

- CITY BOUNDARY
- PLAN BOUNDARY
- STORM SEWER
- STORM SEWER(BY OTHERS)
- ← OVERLAND DRAINAGE

O'BRIEN LAKE OUTLINE PLAN

Map - 9
**OVERALL STORM
 SEWER SERVICING**
 OP-03-1B February 6, 2012



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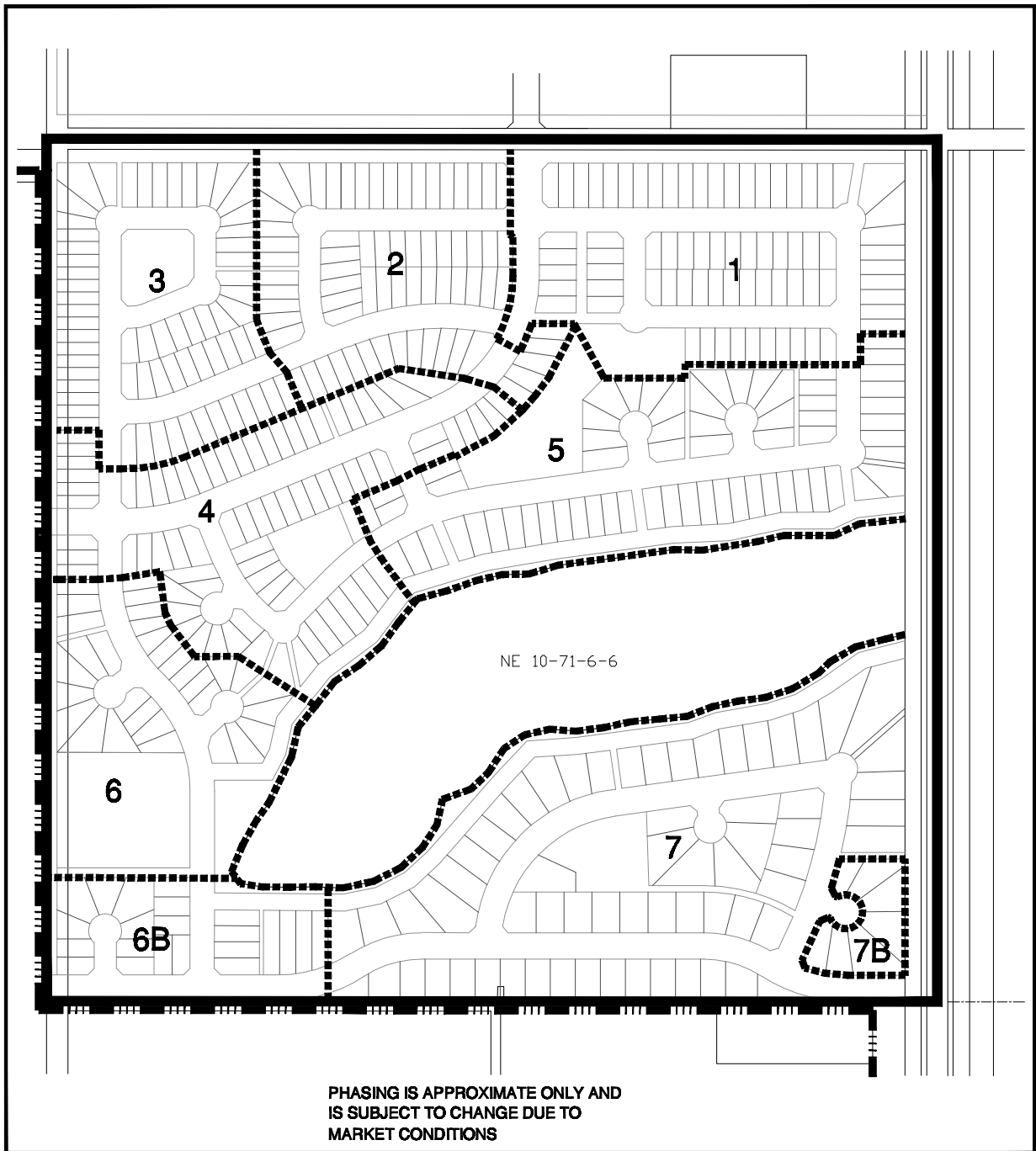
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LEGEND

- CITY BOUNDARY
- PLAN BOUNDARY
- PHASING

O'BRIEN LAKE OUTLINE PLAN

Map - 10 PHASING

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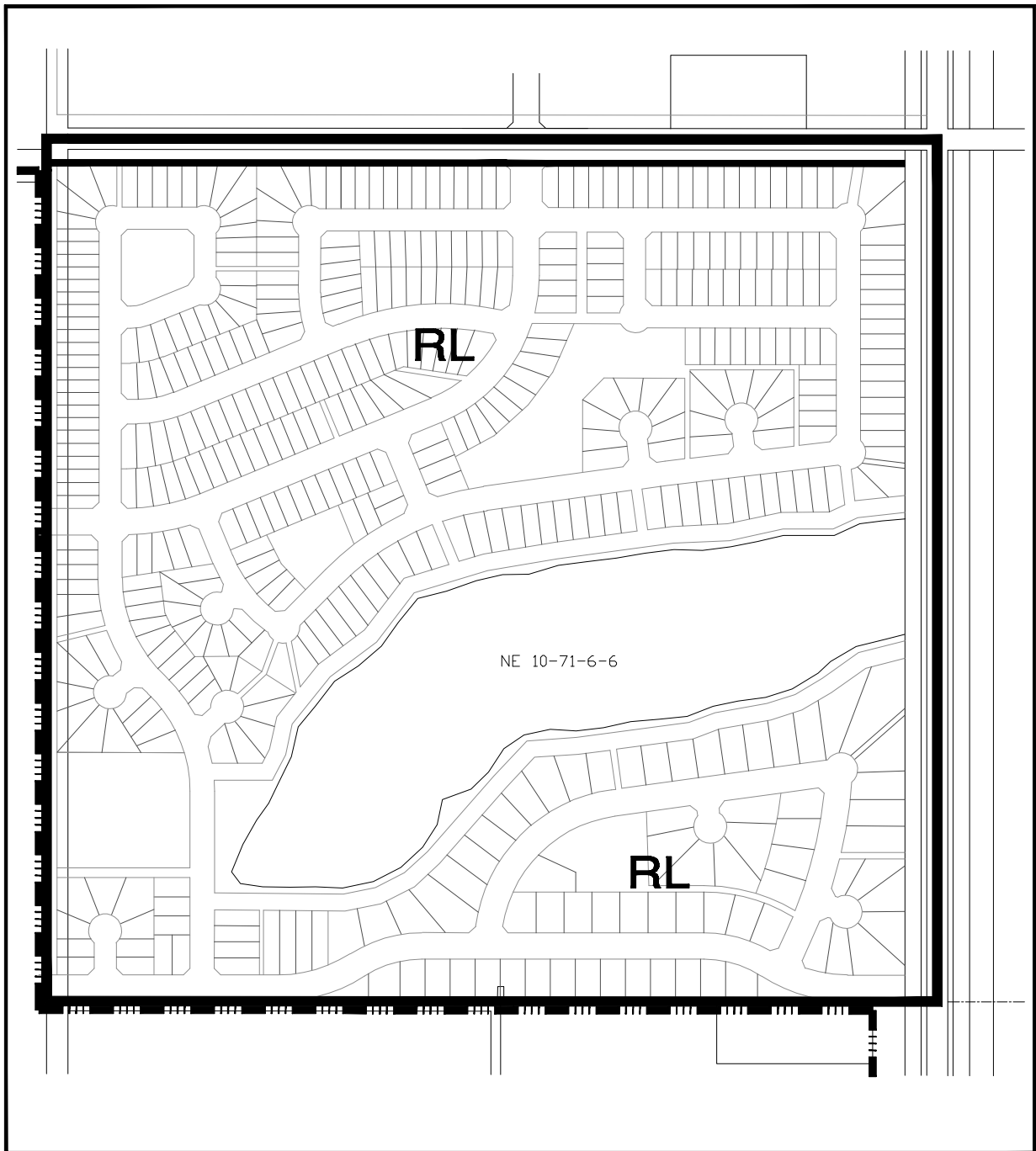
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LEGEND

RL - LOW DENSITY RESIDENTIAL

O'BRIEN LAKE OUTLINE PLAN

Map - 11
ZONING

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